

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 1, 2016/2017

### MAX2013 – 3D ANIMATION

(All sections / Groups)

18 OCTOBER 2016  
9.00 a.m. - 11.00 a.m.  
( 2 Hours )

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#### INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 4 pages with 5 questions only.
2. Answer **FOUR** out of FIVE questions. All questions carry equal marks and the distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

**QUESTION 1 :**

(a) Peter wants to make a 3-second 3D turnaround of a 3D asset. His render setting is set to 720 by 576 pixels at 25 frames per second. Peter has keyframed "0" on Rotate Y on the first frame and keyframed "359" on Rotate Y on the final frame.

(i) What is the number of the final frame? **(1 mark)**

(ii) Why is "359" keyframed on the final frame instead of "360"? **(2 marks)**

(iii) Image 1 shows how the graph editor looks like after Peter has added in the keyframe in the first and final frame. He needs to have the turnaround playing at constant speed without any signs of slowing down or speeding up. **NAME** the graph tangent that Peter should change to and **ILLUSTRATE** how the graph would look like after it has been applied. **(3 marks)**

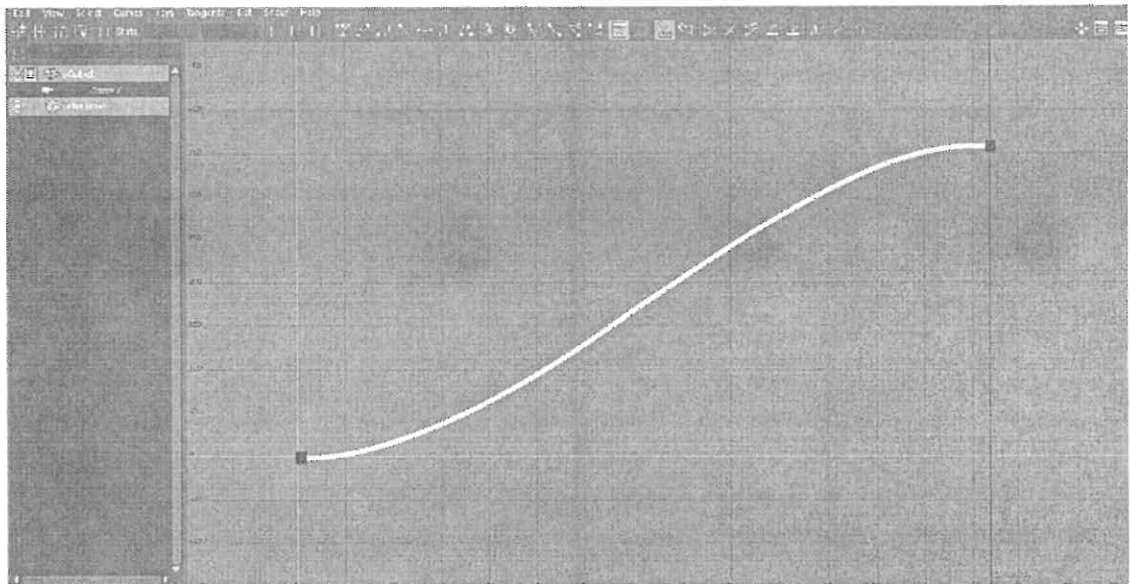


Image 1

Continued .....

- b) i) Image 2 shows a graph tangent in the Graph Editor. **NAME** the graph tangent.  
(1 mark)

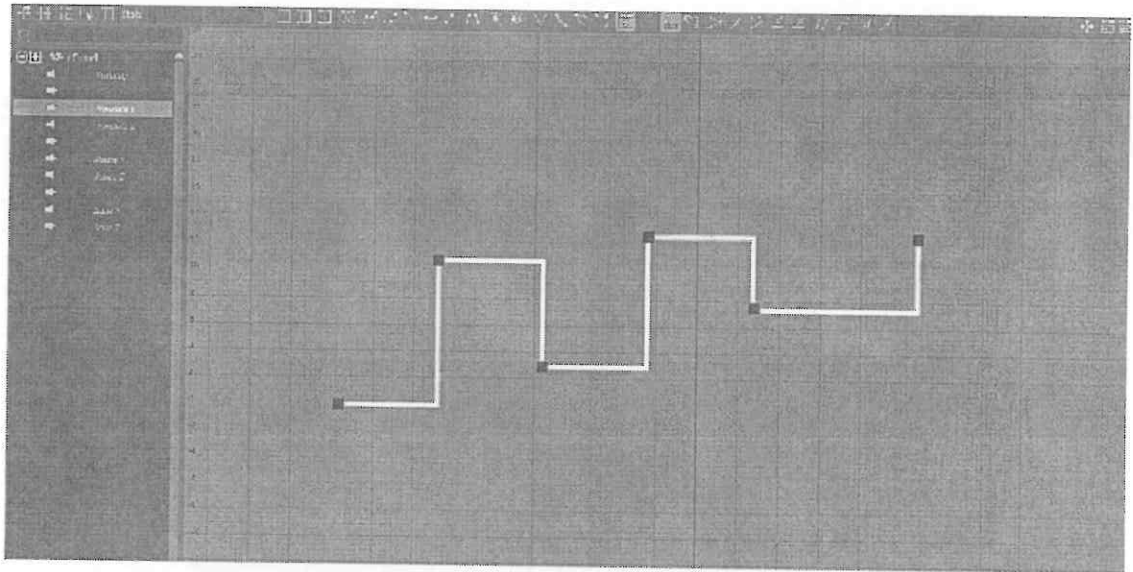


Image 2

- ii) Provide **THREE** (3) animation **EXAMPLES** in which the graph tangent in Image 2 would be useful to an animator.  
(3 marks)

Continued .....

**QUESTION 2 :**

Stuart has been asked to rig and bind the character shown on Image 3.

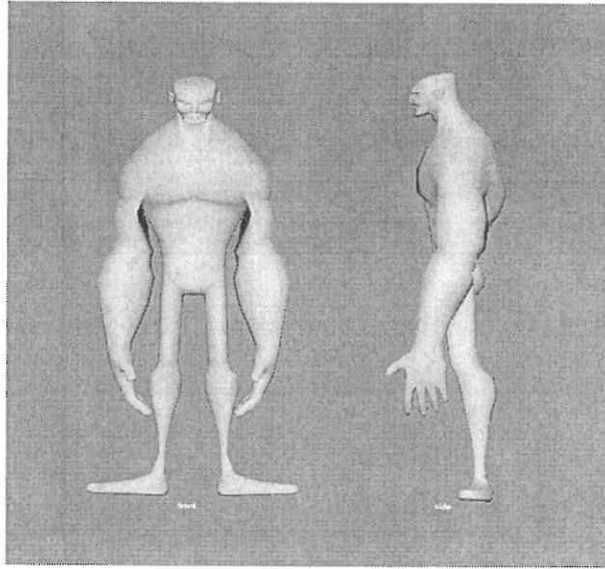


**Image 3**

- a) What complications will Stuart probably face in providing an efficient and working character rig for an animator to work with? **(4 marks)**
- b) Explain what is a bind pose? **(2 marks)**
- c) Before he was able to skin the model, Stuart received an update from his producer in which he has been told that character will now be wearing a jumpsuit, making it a multi-mesh model. EXPLAIN TWO (2) ways in which Stuart can approach the skinning process of the character which would decrease the chances of the different meshes to intersect during the animation process. **(4 marks)**

**Continued .....**

**QUESTION 3:**

- a) In character animation, key poses are movements that show the pivotal physical actions or emotional moments of the scene. **EXPLAIN** with examples the **THREE** (3) characteristics of a good keypose. (6 marks)
- b) In an animation process, the animation of facial expressions are typically done after a character's overall body animation has been set. What is the role of facial animation? (4 marks)

**QUESTION 4:**

A Visual Effects production typically requires computer-generated 3D elements to be composited into a live-action footage. Match-moving is vital in achieving an almost seamless integration of the CG asset and the footage.

- a) What is match-moving? (2 marks)
- b) **EXPLAIN** the **FOUR** (4) basic steps in the match-moving process. (8 marks)

**QUESTION 5:**

Tommy is required to a clown picking up a ball from the floor, walk across a room while juggling the ball for 30 seconds and then setting it down on a table. **DESCRIBE** in detail **TWO** (2) methods in which Tommy can approach the animation. (10 marks)

End of Paper.